

PATENT APPLICATION BASED ON:

Docket Number 83171/CEB

Inventor(s): Susan T. Tingey
Stephen J. Warren
Donna M. Cirella
Eugene Sisto
Joseph A. Manico

Attorney: Clyde E. Bailey, Sr.

Document ID: CEB\83171\83171US01.DOC

**PACKAGE AND METHOD OF MAKING SAME FOR STORING AND
DISPLAYING PRODUCT**

Express Mail No.: EL809161687US

Mailed: December 17, 2001

11/22/01 11:22:01

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STORING AND DISPLAYING PRODUCT**

CROSS-REFERENCE TO RELATED APPLICATIONS

5 The present application is related to U.S. Application Serial ~~no.~~ ^{10/023,249}
~~Number~~ (Docket 83783), filed 12/17/01, by Tingey, et al., and entitled,
"Case For Carrying And Storing Light And Moisture Protected Product;"
and U.S. Application Serial Number ^{10/022,1687} (Docket 83784), filed 12/17/01, by
10 Tingey, et al., and entitled, "Storage And Display Package For Containing
Light And Moisture Protected Articles Therein."

FIELD OF INVENTION

15 The invention relates to the field of packaging. More particularly,
the invention concerns a package for storing and displaying product, such as
photographic film product and the like, in an easily accessible and convenient
case.

BACKGROUND OF THE INVENTION

20 One way to display photographic products, such as camera film,
for retail sale is in a full paperboard structure, commonly called a carton. An
example of such a carton is one that is described and illustrated in U.S. Patent No.
5,474,183, entitled "Carton For Enclosing And Displaying Articles," by Warren et
al., Dec. 12, 1995. Commonly, when such a carton is opened to gain access to the
product inside, the carton flaps are rendered useless thereafter leaving no
reasonable way to secure the unused product inside the carton. Moreover, it is
well known that these cartons do not provide much protection from tampering or
25 moisture.

30 Another well-known practice for displaying photographic product
is to enclose the product in a flexible material package that once opened is
destroyed, leaving no method to secure the unused product inside the flexible
package. Single unit, hermetically sealed plastic film containers packed within
cartons or flexible display packages provide physical and moisture protection but
individual containers are cumbersome to handle and transport when multiple rolls
of film are required. Additionally, in high humidity conditions, because of the

hermetic seal, moisture may become entrapped in the product container having exposed film therein. In the case of 35mm film there is no means provided to determine the exposure status of the film. If multiple rolls of the same variety of films are sealed within individual plastic containers they may be mistakenly used
5 after they have been exposed, ruining both the initial and subsequent sets of images.

Yet another method disclosed in U.S. Patent No. 5,139,165,^{5,474,183}
entitled "Carton For Enclosing And Displaying Articles," by Warren et al., Dec.
12, 1995, describes a single piece, molded rigid container that can be opened with
10 one hand, can be sealed against moisture, and provides protection from external force and heat by using air gaps provided by internal support structures. It also includes the use of shrink-wrap as an external protection layer to ensure the "virginity" of the enclosed product. These techniques provide no means to indicate if any or all of the enclosed cartridges of photographic film have been
15 used or are fresh, nor does it provide individual protection for the enclosed unused cartridges. Also, the rigid container can be resealed when closed, risking entrapping high humidity and moisture with the used and fresh film cartridges. In addition the use of shrink-wrap as an external wrapper is a limited means to provide instructions, advertising, physical protection, and physical display options
20 such as peg hangers.

Therefore, a need persists in the art for a package that conveniently stores and displays product in a reusable product container or case that protects the product from adverse consequences of light and moisture.

SUMMARY OF INVENTION

25 It is, therefore, an object of the invention to provide a package and method of making such a package that can conveniently store and display a product in an enclosable case.

It is another object of the invention to provide a package for storing and displaying a product that can be reused once all or a portion of the
30 product contained therein is used.

Still another object of the invention is to provide a package for storing and displaying a product wrapped in a moisture and light impervious barrier material.

5 An important feature of the package of the invention is a display member that utilizes a transparent shell partially sandwiched between overlapped panels of the display member to securely encase a product container for display.

The present invention is directed to overcoming one or more of the problems set forth above. Briefly summarized, according to one aspect of the invention, a package for storing and displaying product includes a display
10 member having partially overlapped, closely spaced front and rear layers. A recloseable product container is provided for containing at least one unit of product. The product container is removably attached to the product display with a transparent shell enveloping the product container and partially securely sandwiched between overlapped, closely spaced front and rear layers of the
15 display member.

In another aspect of the invention, a method of making a package for storing and displaying light and moisture protected articles comprises the steps of forming a display member. The display member has partially overlapped, closely spaced front and rear layers. A reusable article container is provided for
20 containing at least one article in a moisture and light impervious enclosure. The reusable article container is then attached to the display member to thereby form the package for storing and displaying light and moisture protected articles.

The present invention has numerous advantages over prior art developments, including: it allows packaging of product in a reusable container; it
25 is both a simple and a convenient way to display and then store a product for later use by the consumer; it provides an easily recloseable product container that protects used and unused product stored therein; it will allow packaging of hermetically sealed photographic product in a reusable container; it provides tamper resistant and tamper evident outer display package; it contains a hinged

lid, secured to the bottom portion of the package; and, it has a convenient case carrying member.

BRIEF DESCRIPTION OF THE DRAWINGS

5 The foregoing as well as other objects, features and advantages of this invention will become more apparent from the appended Figures, wherein like reference numerals denote like elements, and wherein:

Figure 1 is a front view of a photographic product in a travel case and display package;

10 Figure 2 is a perspective view of a photographic product in a travel case and display package;

Figure 3 is a side, cross-sectional view of an unopened, unused, and unexposed photographic product in a travel case and display package;

15 Figure 4 is a side, cross-sectional view of an unopened, unused, and unexposed photographic product in a closed travel case with display package removed and discarded;

Figure 5 is a side, cross-sectional view of an unused and unexposed photographic product in an opened travel case, with the barrier layer wrap intact;

20 Figure 6 is a side, cross-sectional view of an unused, and unexposed photographic product without the travel case and with the barrier layer wrap intact;

Figure 7 is a side, cross-sectional view of a used and exposed photographic product in an opened travel case and with the barrier layer wrap removed and discarded;

25 Figure 8 is a side, cross-sectional view of a used and exposed photographic product in a closed travel case and with the barrier layer wrap removed and discarded;

Figure 9 is a perspective view of a closed travel case with the display package removed and discarded;

30 Figure 10 is a perspective view of an opened travel case with three unused and unexposed photographic products with the barrier layer wraps intact;

Figure 11 is a perspective view of an opened travel case with two unused and unexposed photographic products with the barrier layer wraps intact, and one used and exposed photographic product with the barrier layer wrap removed and discarded;

5 Figure 12 is a perspective view of an opened travel case, three used and exposed photographic products with the barrier layer wraps removed and discarded;

Figure 13 is a perspective view of a travel case with an integrated lanyard and an attached wrist strap;

10 Figure 14 is a side view of a travel case with an integrated belt clip;

Figure 15 is a perspective view of a separator insert; and,

Figure 16 is a perspective view of an opened travel case with a separator insert.

15 **DETAILED DESCRIPTION OF THE INVENTION**

Turning now to the drawings, and particularly to FIGS. 1 - 3, the package 10 of the invention for storing and displaying a product, such as light and moisture barrier protected photographic film product, is illustrated. According to FIGS. 1, 2, and 3, package 10, broadly defined, has a display member 12, a reusable product container or travel case 20 (hereinafter referred to as "case"), and a plastic shell 30, attachable to display member 12, that envelops the case 20.

Referring to FIGS. 2 and 3, display member 12, more particularly, includes a front layer 14 and a rear layer 16. As seen in FIG. 3, front layer 14 partially overlaps rear layer 16 and forms a closely spaced gap 18 therebetween. Front layer 14 and rear layer 16 of display member 12 are preferably constructed of a paperboard stock material, although other materials, such as a wide array of plastics, may be used. According to FIG. 3, front layer 14 and rear layer 16 are designed to trap first and second extended flange portions 30a, 30b, respectively, of plastic shell 30 in gap 18. Moreover, front layer 14 and rear layer 16 may be used for assembly, graphics call-outs, instructions, and retail display (not shown).

Front and rear layers 14, 16 are attached together with any appropriate heat activated or pressure sensitive adhesive, or mechanical fasteners such as staples (not shown). Although various means may be used to display package 10, we prefer utilizing a display lanyard cut through paperboard and plastic sections to form a through-opening to facilitate retail display by providing a means to hang the package from a hook, pegboard or the like. According to FIG. 2, during assembly of package 10, reusable case 20 is inserted into plastic shell 30 having first and second extended flange portions 30a, 30b. First and second extended flange portions 30a, 30b of plastic shell 30 are then snugly sandwiched or trapped between gap 18 formed by overlapping panel front and rear layers 14, 16.

Referring to FIG. 3, transparent plastic shell 30 may be constructed from a range of clear or semi-clear transparent materials. We prefer constructing plastic shell 30 from PVC or PET. Skilled artisans will appreciate that other materials, such as polyester, acrylic, etc., may also be used to construct plastic shell 30. In our preferred embodiment of the invention, plastic shell 30 is shaped to conform to the case 20 by either vacuum-forming or molding, depending on the material selected.

Referring to FIGS. 3 - 5, 7 - 14, and 16, case 20 is sealed within display package 10, as described above. As indicated above, plastic shell 30 encompasses rigid, reusable case 20 containing, for instance, unused photographic product 100. Case 20 is preferably constructed of HDPE although other materials, such as polypropylene, could be used. In practice, case 20 may contain one or more rolls of unused photographic product 100. Moreover, case 20 could be transparent, or opaque, or opaque with a transparent viewing window (not shown). Additionally, case 20 can be manufactured so that brand identification, logos, instruction, and the like, are permanently imbedded in plastic case material.

According to FIG. 3, a cross-sectional view of an unopened, unused, and unexposed photographic product 100, sealed within barrier wrap 130 is illustrated. Unused photographic product 100 is shown stored inside case 20 that is mounted for display in package 10. As indicated, display member 12 of

package 10 has a front layer 14 and a partially overlapped rear layer 16 which could be a single hingeably attached paperboard portion (not shown) or two separate layers 14, 16, as shown. The inside portion of the display member may contain a coating, e.g., a thermal adhesive or thermal resin, that may be activated
5 by heat or pressure or the entire assembly could be attached with a mechanical fastener such as a staple (not shown). As indicated, gap 18 between overlapping front and rear layers 14, 16 traps or "sandwiches" the extended flange portions 30a, 30b of plastic shell 30 with the case 20 inside the shell 30.

Referring to FIGS. 5 and 6, typically, unused photographic product
10 100, such as a film roll, requires a flexible barrier wrap material 70 or container around the unused photographic product 100 to provide physical protection and a seal portion or "hermetic seal" 72 to provide barrier property protection to prevent high humidity and moisture from contacting the unused photographic product 100. Case 20 is best used to accommodate product that is hermetically sealed and
15 protected from light and moisture exposure. This is generally accomplished by providing a product 100 to be packaged in the package 10 of the invention that is hermetically sealed, such as by sealing individual rolls of unused photographic product 100 with a flexible barrier wrap material 70. This flexible barrier wrap material 70 may comprise a heat sealed aluminized thermoplastic or similar
20 material.

Referring to FIGS. 4 - 8, in a preferred embodiment of the invention, case 20 has a top cover 52 and bottom section 54 connected by hinge 56 that would allow opening and re-closing. Hinge 56 may be of the heat and pressure variety commonly known as a "living hinge" or a conventional
25 mechanical hinge (not shown). Secure closure is accomplished by the mechanical engagement of bottom latching interface edge 60 and top cover latching interface 62. Case 20 is opened with finger latch release 64. These features allow product contained in case 20, such as unused photographic product 100 to be removed, as well as unused product to be securely enclosed in the case 20 once the re-closure
30 is engaged. Case 20 is intended to be used as a "travel case," allowing the

consumer to remove one roll of film, securing the remaining rolls within the case 20 using the top cover 52, hinge 56, bottom latching interface edge 60, and the top cover latching interface 62 as the re-closing features.

Figure 4 depicts closed case 20 with the enclosed unused photographic product 100 with barrier wrap material 70. Closed case 20 provides stylish, ergonomic, and convenient containment and protection for photographic products and is designed to fit into a purse or travel bag. Each roll of unused photographic product 100 is individually sealed with a barrier wrap material 70. Individual wrapped product allows the removal and opening of one roll of photographic product while the remaining rolls are securely wrapped and hermetically sealed. This feature also serves as a usage indicator for photographic products, like 35mm film, that do not include an integrated usage indicator. The lack of flexible barrier wrap material 70 on rolls of film in the travel case provides a clear indication of usage. Some photographic products, like 24mm Advance Photo System™ and 110 films, include an integrated usage indicator but do benefit from individual hermetic seals. In addition, the barrier wrap material 70 can contain printed information, not shown, indicating the properties of the contents such as film type and film speed.

Figure 5 depicts opened case 20 with an enclosed unused photographic product 100 in barrier wrap material 70 with seal portion 72. Opened case 20 consists of case top cover 52, case bottom section 54, and travel case “living” hinge 56 which may be molded as an integral part of the case 20. Applying an upward pressure to finger latch release 64 opens case 20. This action releases the top cover section latching interface 62 from bottom latching interface edge 60. Case top cover 52 remains attached to case bottom section 54 via flexible case hinge 56.

Figure 6 depicts unused photographic product 100 in barrier layer wrap 70 having seal portion 72. The unused photographic product 100 is enclosed in a barrier wrap material 70 and hermetically sealed via barrier layer seal 72. In one embodiment, barrier wrap material 70 is a sheet of aluminized

thermoplastic with the seal portion 72 created with heat and pressure. Other suitable barrier layer materials and sealing techniques can be used.

Referring to FIG. 7, a used photographic product 110 has been placed in case 20. The lack of barrier wrap material 70 provides a clear indication
5 that the photographic product 110 has been used and is being stored in case 20 for future processing.

Figure 8 depicts a used photographic product 110 that has been placed in case 20. Case 20 has been closed to contain and protect used photographic product 110 until it is submitted to a photo-processing lab for photo
10 development.

Figure 9 is a perspective view of a closed case 20 designed to hold three (3) articles, such as three (3) rolls of 24mm IX film. It is understood that the case 20 can be designed to hold more or fewer rolls of film or other photographic products and formats.

Referring to FIG. 10, an opened case 20 containing unused photographic products 100 in sealed barrier wrap material 70. Case 20 has all the same features as described above for protecting the product from moisture and vapor.
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Referring to FIG. 11, a perspective view of an opened case 20 containing two (2) unused photographic products 100 in sealed barrier wrap material 70 and one (1) used photographic product 110. The flexibility of case 20 for containing product in various states of use is illustrated.
20

Figure 12 is a perspective view of an opened case 20 containing three (3) used photographic products 110. The case 20 provides utility by conveniently carrying multiple rolls of unused film to a "picture taking event" such as a party or a vacation, or for transporting used film to a photo-processing lab.
25

Turning now to FIG. 13, a perspective view of case 20 with an optional integrated lanyard 180 and attached wrist strap 190 is illustrated. The

FIG. 13

integrated lanyard 180 may be molded as part of the case 20 or attached with adhesives or screws (not shown).

Figure 14 is a side view of case 20 with optional integrated belt clip 200. The integrated belt clip 200 may be molded as part of the case 20 or
5 attached with adhesives or screws. Belt clip 200 must be configured not to interfere with the operation of case top cover 52 for opening and closing case 20. Belt clip 200 can be used to secure the case 20 to a belt, camera strap, or windshield visor.

Referring to FIGS. 15 and 16, a separator insert 210 for isolating
10 and maintaining product contained in case 20 is illustrated. Separator insert 210 may be used to maintain the position of the enclosed photographic products, 100, 110, and can also include instructions, coupons, and the like (not shown). In addition, separator 210 can be impregnated with a moisture absorbing, desiccant material such as silica gel, activated alumina, activated clay and the like.
15 According to FIG. 16, a perspective view of separator insert 210 installed in case 20 is depicted. As shown, separator insert 210 primarily maintains the position of photographic products 100, 110 stored in case 20.

The invention has been described with reference to a preferred embodiment thereof. It will be appreciated, however, that a person of ordinary
20 skill in the art can effect variations and modifications without departing from the scope of the invention.

PARTS LIST:

- 10 package
- 12 display member
- 14 front layer of display member 12
- 16 rear layer of display member 12
- 18 gap between overlapping front and rear layers
- 20 reusable product container or travel case
- 30 plastic shell
- 30a first extended flange portion
- 30b second extended flange portion
- 52 top cover of case 20
- 54 bottom section of case 20
- 56 hinge of case 20
- 60 bottom latching interface edge
- 62 top cover latching interface edge
- 64 finger latch release
- 70 flexible barrier wrap material
- 72 seal portion or hermetic seal
- 100 unused photographic product
- 110 used photographic product
- 130 barrier wrap
- 180 integrated lanyard
- 190 wrist strap
- 200 belt clip
- 210 separator insert